A Shifting Snow Line Could Have Delivered the Earth's Water

Marc Kuchner¹, Andrew Youdin¹, and Matthew Bate² (Email: mkuchner@astro.princeton.edu)

¹Department of Astrophysical Sciences, Princeton University, Princeton, New Jersey ²Institute of Astronomy, University of Cambridge, Cambridge, United Kingdom

Recent models of protoplanetary disks suggest that the solar nebula could have cooled to a temperature low enough that water could condense at the Earth's orbital radius. We investigate the possibility that the Earth's ocean water originated as ice grains formed in a cold nebula, delivered to the Earth by drag forces from co-orbital nebular gas.

